

ELECTION

In compliance with the Examiner's instructions, Applicants elect the "SLEEVE" variant of the "Species." The claims that are readable on this election are:

Claims 1-3, 4-9, 18-35 and 38-53.

REMARKS

Applicants express concern that the Examiner has stated in his action (see page 2, line 6):

"Species III - Directional controller comprises a cam and a sleeve (Figure 6)".

Nothing is further from reality. Figure 6 shows a sleeve variant or embodiment of the instant invention and the specification, as submitted describes such variant (embodiment). It is important to note that the invention described in the disclosure is an improvement of Applicants' earlier disclosure – now U.S. Patent 5,979,570. In U.S. Patent 5,979,570, Applicants described an invention that used ONE set of sleeves to obtain a directional drilling tool. During the further course of development of the tool, which involved extensive and expensive drilling operations, Applicants discovered that greater directional control could be obtained if two sets of sleeves were used at opposite ends of the tool. Therefore, this application resulted. (See the instant disclosure at bar.)

Two basic forms of a SLEEVE offset are disclosed, which are essentially the same. ONE – concentric sleeves, with built-in offsets, that revolve as needed to cause overall offset in the tool, and TWO – eccentric sleeves that also revolve as needed to cause overall offset in the tool. Thus, the two sleeves are identical in purpose and function. Just a slight manufacturing difference. The overall purpose is to obtain a directional drilling tool that will cause offset in the

wellbore by placing a force between the rotating drilling string and the wellbore such that the string deviates in a required direction.

Figure 6 illustrates the eccentric variant (embodiment), whereas Figure 1 illustrates the concentric variant (embodiment). At page 19, last paragraph, last sentence, and continuing to page 20, the disclosure clearly states that “. . . the upper part of the inner sleeve differs from that shown in Figure 1 in that the upper part of the inner sleeve 12a is concentrically bored. This combination of a concentric sleeve and an eccentric lower sleeve allows more control over the drilling direction . . . ”² Thus, Figure 1 and Figure 6 go to the SLEEVE variant (embodiment) of the instant device and only involve SLEEVES. However, engineers are apt to use more than one word (to show that they understand the language) to describe the same part and the Applicants have tended to use the word CAM as a synonym for SLEEVE.

The fact that the Examiner commented that Figure 6 combines cams and sleeves goes to the semantics of the disclosure shows how engineers can fall into the above described synonym. **AS USED HERE, SLEEVES and CAMS are the same: there are slight differences, but the two can achieve the same result.** These two words describe the same part or device that functions the same. An “overhead cam” is essentially a sleeve with an offset - - - at least this was in the mind of the Applicants in drafting the disclosure. (Sir Winston Churchill once wrote that the English and the Americans are separated by a common language – this is certainly the case at bar as the application was drafted in the United Kingdom and the current attorney is representing Applicants in the US.)

² The original specification at page 14 describes the concentric boring of the sleeve.

As stated earlier, the instant device at bar involves an improvement to the original Rotary Steering Tool --- that is a device that uses TWO sleeves (or actuators to cause offset of the mandrel) at either end of the tool. (Compare this to a single set of sleeve actuators.) Thus, whether sleeves, cams or linear actuators are used to cause the offset, the effect is the same; the overall device offsets the drill string within the wellbore by:

a) knowing where the bottom of the hole is (the weighted – pregnant housing), and

b) causing a wellbore offset force by moving the inside offset mandrel to place a force between the housing and the drill string thereby causing the drill bit to move in the desired direction.

Therefore, the instant invention describes an improvement to U.S. Patent 979,570, that uses directional control applied at TWO ends that in turn may be accomplished by sleeves (concentric and eccentric), cams – that are viewed as sleeves, or linear actuators that have the same function as the sleeves.

In light of the Examiner's restrictions, Applicants would ask the Examiner to reconsider his restriction requirement in light of the above remarks. If the Examiner still finds that these claims describe a different species then the Examiner is asked to cancel claims 10-17 and 36-37, with the understanding that the rights to such device have not been compromised and may be claimed in a subsequent divisional application or claimed during subsequent responses to office actions in the prosecution of this Application as set forth by the Examiner in his Restriction Requirement.

It is believed that this submission meets the requirements of the Office as set forth in the Notice to Make Election of Species. Applicants wish to thank the Examiner for working with

their Attorney and for his patience in dealing with afore identified patent application. Acceptance of this submission is hereby most respectfully requested.

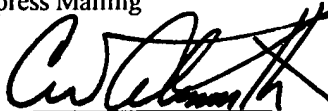
Respectfully submitted



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Certificate of Service by EXPRESS MAIL

I, Charles W. Alworth, certify that the above identified Response to a Requirement to Elect Spices was made by EXPRESS MAIL, prepaid, receipt number EV 094373803 US, on the 18th day of October, 2202. Under the Rules, the Commissioner is requested to assign the date of filing of this Response as the Date of Express Mailing



• • C. W. Alworth

Dated 18 October 2002

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